

| Exploring the Extreme | | | |
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| 2000 Mathematics | | | |
| Curriculum Frameworks | | | |
| Massachusetts Mathematics | | | |
| Grades 1-2 | | | |
| Activity/Lesson | State | Standards | |
| Finding the Center of Gravity Using Rulers | MA | MA.1-2.2.M.5 | Select and correctly use the appropriate measurement tools, e.g., ruler, balance scale, thermometer. |
| Finding the Center of Gravity Using Rulers | MA | MA.1-2.2.D.3 | Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data. |
| Exploring the Extreme | | | |
| 2000 Mathematics | | | |
| Curriculum Frameworks | | | |
| Massachusetts Mathematics | | | |
| Grades 3-4 | | | |
| Activity/Lesson | State | Standards | |
| Finding the Center of Gravity Using Rulers | MA | MA.3-4.4.D.1 | Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data. |
| Changing the Center of Gravity Using Moment Arms | MA | MA.3-4.4.P.3 | Determine values of variables in simple equations, e.g., $4106 - x = 37$, $5 = y + 3$, and $z - y = 3$. |
| Changing the Center of Gravity Using Moment Arms | MA | MA.3-4.4.M.1 | Demonstrate an understanding of such attributes as length, area, weight, and volume, and select the appropriate type of unit for measuring each attribute. |
| Exploring the Extreme | | | |
| 2000 Mathematics | | | |
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| Massachusetts Mathematics | | | |
| Grades 7-8 | | | |
| Activity/Lesson | State | Standards | |
| Vectoring | MA | MA.7-8.8.G.3 | Demonstrate an understanding of the relationships of angles formed by intersecting lines, including parallel lines cut by a transversal. |
| Fuel Efficiency | MA | MA.7-8.8.P.8 | Explain and analyze-both quantitatively and qualitatively, using pictures, graphs, charts, or equations-how a change in one variable results in a change in another variable in functional relationships, e.g., $C = \pi d$, $A = \pi r^2$ (A as a function of r), $A_{\text{rectangle}} = lw$ (A rectangle as a function of l and w). |

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| Fuel Efficiency | MA | MA.7-8.8.P.10 | Use tables and graphs to represent and compare linear growth patterns. In particular, compare rates of change and x- and y-intercepts of different linear patterns. |
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